

REMARKS

Claims 1-29 remain pending in this application. Claims 1, 10, 14, 17, 21, 25, 28, and 29 are independent. No claims have been amended, added or canceled by this Response.

Although the Examiner has indicated the allowability of various claims in this application, Applicant respectfully traverses the present rejections of the remaining claims because the independent claims and claims depending therefrom are submitted as being distinguishable and therefore patentable over the applied art, as discussed further below.

Unpatentability Rejection over Lager et al.

Withdrawal of the rejection of claims 17 and 25 under 35 U.S.C. §103(a) as allegedly being unpatentable over Lager et al. (US 6,636,502) ("Lager") is requested. The Examiner has failed to make a *prima facie* case of unpatentability.

At the outset, Applicant notes that, to establish a *prima facie* case of obviousness, three basic criteria offer useful insights. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference must teach or suggest all the claim limitations.¹ Further, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure.² The Supreme Court recently held that it is necessary, *inter alia*, for a court to look to interrelated teachings of multiple patents in order to determine whether there was an apparent reason to combine the known elements in the claimed. In this regard, the Court held "[t]o facilitate review, this analysis should be made explicit."³ "[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."⁴

¹ See MPEP §2143.

² *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) and See MPEP §2143.

³ *KSR Int'l. Co. v. Teleflex Inc.*, 550 U.S. ____ (2007) (see p. 14).

⁴ See *Id.*, citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

Generally, Applicant's invention as recited in the various independent claims generally involve a situation in which three support nodes are used, i.e., the first gateway support node provides instructions to tunnel data packets between a second gateway support node in a serving support node (i.e., the third support node) by sending the address of the second gateway support node to the serving support node. None of the applied art even hints of the availability of such a solution.

Lager fails to disclose, teach, or suggest a first support node arranged to send a message to another support node, wherein the message contains an address of a second support node such that the other support node uses the received address of the second support node to activate an establishment of a tunnel to the second support node. Specific deficiencies of Lager with respect to the independent claims are provided below.

Specific Deficiencies of Lager with Respect to the Independent Claims

Independent Claim 17

In addition, the applied art, either alone or in combination, does not disclose, teach or suggest a support node arranged, *inter alia*, and "*in response to an address of a second gateway support node included in a message received from the first gateway support node, to activate establishment of a tunnel to be used for transmitting packets with said second gateway support node,*" as recited in previously-presented independent claim 17 (*emphasis added*).

Independent Claim 25

Still further, the applied art, either alone or in combination, does not disclose, teach or suggest a support node which includes, *inter alia*, "a processor configured, *in response to an address of a second gateway support node included in a message received from a first gateway node, to activate establishment of a tunnel to be used for transmitting packets with said second gateway support node,*" as recited in previously-presented independent claim 25 (*emphasis added*).

Accordingly, since the applied art does not teach or suggest all the claimed limitations, reconsideration and allowance of independent claims 17 and 25 are respectfully requested. In

addition, dependent claims 18-19 and 26-27 variously and ultimately depend from these allowable independent claims, and are submitted as being patentable at least on that basis, without further recourse to the patentable features recited therein.

Discussion of Applicant's Disclosure

By way of background, one or more embodiments and aspects of Applicant's disclosure are directed to a method, system, gateway support node, and computer-readable medium carrying out computer instructions in which selection of a gateway support node in a packet-switched network is controlled, for example, in a mobile communication network.

The present disclosure is based at least in part on the idea that the gateway support node suggests another, more suitable, gateway support node with which a tunnel should be established to the serving support node. The gateway support node may make the suggestion either when it rejects the request for establishing a tunnel, or when the conditions change so that it is practical to remove the existing tunnel. The operator can thereby distribute the load dynamically to the gateway support nodes in the network and transfer the tunnel between the SGSN and the gateway support node to another gateway support node depending on the conditions, *e.g.* in connection with handover of serving support nodes.

In one embodiment, the messages which are sent to the serving support node and indicate the most suitable gateway support node are messages in response to a 'Create PDP Context' request. In this embodiment, it is quite simple to implement by adding one parameter/attribute to an existing message. This enables gradual introduction of the feature into a network, and thus, both older support nodes lacking the inventive functionality, and new support nodes with improved functionality of Applicants' disclosure can be used simultaneously in the network, without interfering with its function.

In another embodiment, where the end of an existing tunnel is to be transferred from one gateway support node to another, the tunnel may be removed in the gateway support node only in response to a positive acknowledgement. Therefore, packets are not lost if there has not been time to establish a tunnel between the other gateway support node and the serving support node. This embodiment thereby ensures satisfactory transmission of packets.

Discussion of Lager and its Deficiencies

According to the Abstract, Lager is purportedly directed to a GPRS-subscriber selection of multiple internet service providers in which a switching device (PLMN-SW) in a mobile radio communication system (PLMN) which supports a GPRS-network allows to connect a terminal station (GPRS-MS) of the mobile radio communication network (PLMN) with one of a plurality of packet data communication networks (PDN1, PDN2, IN). The selection of the packet data communication network (PDN1, PDN2, IN) is asserted as being based on the transmission of a specific network indication parameter (NIP) from the terminal station (GPRS-MS) of the mobile radio communication network (PLMN). The network indication parameter (NIP) is allegedly transmitted to a serving (GPRS) support node (SGSN) as a special parameter in a PDP context activation procedure. Thus, a large number of internet service providers (ISP1, ISP2, ISP3) purportedly can be connected to a GPRS-network.

Lager clearly teaches that GPRS introduces two different kinds of support nodes (see col. 3:9), i.e., a serving support node SSGN (see col. 3:10) and a gateway support node GGSN (see col. 3:26) each having different functions in which the SSGN acts between a mobile terminal and the GGSN and the GGSN interfaces with external networks. Furthermore, in the portions of Lager cited by the Examiner, Lager specifically uses a Gateway GSN and a serving GSN, thereby clearly teaching that a serving GSN cannot be read as a Gateway GSN when addresses are delivered. Thus, Lager at least fails to teach or suggest the feature of a support node arranged, in response to an address of a second gateway support node included in a message received from her first gateway support node, to activate establishment of a tunnel to the second support node, as variously claimed in the independent claims.

The Examiner is requested to specifically identify the portion of Lager describing that a support node sends a message to another support node in which the message contains an address of a second support node, and further wherein the other support node uses the received address of the second support node to establish a couple to the second support node. Applicant submits that Lager is completely silent on any such function performed by a support node.

The Examiner references portions of Lager that actually teach that, due to the evaluation of a Packet Data Protocol (PDP) address, a gateway support node is accessed, and that the PDP

address contains routing information for GPRS users, i.e., *to be used by GPRS users to tunnel data packets between the gateway support node and a serving support node*. Further, Lager defines that the PDP address as described by an individual PDP context in the mobile station (MS), the SGSN, and the GGSN, *thereby clearly teaching that neither the routing information nor the PDP address is an address of a support node*. In addition, it is evident that Lager teaches that two *support nodes* are required, as discussed above.

However, in the invention recited in the various independent claims, *three* support nodes are involved, i.e., the first gateway support node provides instructions to tunnel data packets between a second gateway support node in a serving support node (i.e., the third support node) by sending the address of the second gateway support node to the serving support node. Lager clearly fails to each even hint of the availability of such an alternative.

Accordingly, withdrawal of the rejection and allowance of claims 17-19 and 25-27 are respectfully requested.

Unpatentability Rejection Over Lager and Kelly

Withdrawal of the rejection of claims 1, 14, 20-21, 24, and 28-29 under 35 U.S.C. §103(a) as allegedly being unpatentable over Lager in view of Kelly (US2001/0055299) is requested. The legal requirements for unpatentability have been discussed above.

Specific Deficiencies of Lager and Kelly with Respect to the Independent Claims

Independent Claim 1

The applied art, either alone or in combination, does not disclose, teach or suggest a method which includes, *inter alia*, "*defining at least one condition for a first gateway support node, so that when the condition is fulfilled, a second gateway support node is more suitable for transmitting packets over a connection, the second gateway support node being an alternative to the first gateway support node so that the packets are transmitted from a subscriber either via the first gateway support node or via the second gateway support node, the condition not relating to a receiver of a packet*; detecting, by the first gateway node that the condition is fulfilled, and *instructing, by the first gateway node, to select the second gateway*

support node by sending a first message indicating the second gateway support node", as recited in previously-presented independent claim 1 (*emphasis added*).

Independent Claim 14

Further, the applied art, either alone or in combination, does not disclose, teach or suggest a gateway support node of a packet network which is arranged, *inter alia*, "to transmit, *in response to fulfilment of a predefined condition, a first message indicating another gateway support node which is more suitable for transmitting packets, the predefined condition not relating to a receiver of a packet, wherein the gateway support node is configured not to transmits received packets to the other gateway support node but to transmit the received packets towards their destination address*," as recited in previously-presented independent claim 14 (*emphasis added*).

Independent Claim 21

Furthermore, the applied art, either alone or in combination, does not disclose, teach or suggest a gateway support node of a packet network that includes, *inter alia*, "a processor configured to transmit, *in response to fulfillment of a predefined condition, a first message indicating another gateway support node which is more suitable for transmitting packets, the predefined condition not relating to a receiver of a packet, wherein the gateway support node is configured not to transmits received packets to the other gateway support node but to transmit the received packets towards their destination address*," as recited in previously-presented independent claim 21 (*emphasis added*).

Independent Claim 28

Additionally, the applied art, either alone or in combination, does not disclose, teach or suggest a processor that is configured, *inter alia*, "*to detect, that a condition is fulfilled, the condition being defined for a first gateway support node and not relating to a receiver of a packet, so that when the condition is fulfilled, a second gateway support node is more suitable for transmitting packets than the first gateway node selected for transmitting packets, and to instruct, in response to the condition being fulfilled, to select, instead of the first gateway node,*

the second gateway support node by sending a first message indicating the second gateway support node," as recited in previously-presented independent claim 28 (*emphasis* added).

Independent Claim 29

Finally, the applied art, either alone or in combination, does not disclose, teach or suggest a computer-readable medium having stored thereon a software routine which, when executed on a computer carries out the functions of, *inter alia*, "***detecting that a condition is fulfilled, the condition being defined with respect to a first gateway support node and not relating to a receiver of a packet, so that when the condition is fulfilled, a second gateway support node is determined to be more suitable for transmitting packets than the first gateway node selected for transmitting packets, and instructing to select, instead of the first gateway node, the second gateway support node by sending a first message indicating the second gateway support node,***" as recited in previously-presented independent claim 29 (*emphasis* added).

Accordingly, since the applied art does not teach or suggest all the claimed limitations, reconsideration and allowance of independent claims 1, 14, 21, and 28-29 are respectfully requested. In addition, dependent claims 2-9, 15, 16, 20, and 22-24 variously and ultimately depend from these allowable independent claims, and are submitted as being patentable at least on that basis, without further recourse to the patentable features recited therein.

Further Discussion of Lager's Deficiencies

Examiner refers to Lager's Abstract and to col. 1:8-15 which discloses that a user terminal sends a network indication parameter which indicates which one of the several networks, reachable via one Gateway Support Node, is to be selected. Applicant submits that this portion of Lager clearly fails to disclose, teach, or suggest "a condition for a first gateway packet support node" and "so that when this condition is fulfilled, a second Gateway Support Node is more suitable for transmitting packets over a connection, the second Gateway Support Node being an alternative to the first gateway support node".

The Examiner admits that Lager is deficient with respect to providing a teaching or suggestion of detecting, by the first gateway node, that the condition is fulfilled, and instructing, by the first gateway node, to select the second gateway support node by sending a first message

indicating the second gateway node. The Examiner asserts that Kelly makes up for this admitted deficiency of Lager. Applicant traverses this characterization of the applied art.

Discussion of Kelly and its Deficiencies

Kelly discloses a packet data network as a TCP/IP network, or other non-GPRS network. Thus, a combination of Lager with Kelly would require that the teachings of Kelly would be implemented in the packet data network (PDN) of Lager, connected to a GPRS network via a GGSN. Further, since Kelly clearly teaches that a Gateway is selected on the basis of a telephone number identifying a subscriber apparatus to which a connection is to be established, Kelly also fails to disclose, teach, or suggest the claimed condition *i.e.* "the condition not relating to a receiver of a packet."

The Examiner refers to Kelly at paragraph [0066], however this portion of Kelly merely teaches that a gateway establishes a connection to another gateway. ***It is clearly evident that both gateways are required to establish connections; they are not alternatives for each other.*** Further, ***according to Kelly, the Gateway selection is based on the address of the receiver,*** and not on an address of another Gateway Support Node.

Further, as regards the condition in Kelly, the routing cost is determined on the basis of the receiver, and thereby the routing cost discloses a condition relating to a receiver. However, that is contradictory to what Applicant claims, *i.e.*, "***a condition not relating to a receiver.***" Still further, the network indication parameter (NIP) in Lager is clearly defined for a packet network which the user terminal wants to use for sending and receiving packets.

The Examiner is respectfully requested to specifically point out where the limitation "***a condition not relating to a receiver***" is taught or suggested in either of Lager or Kelly.

Further, since the NIP is sent by the user terminal and defines an external packet data network, the Examiner is further requested to explain how it can relate to condition defined for a first gateway support node, wherein the condition explains when the second Gateway node is more suitable than a first Gateway node.

Thus, a combination of Lager and Kelly teach routing a connection establishment according to the receiver's address or, if the connection establisher, *i.e.*, a user (user terminal) initiating the connection establishment can select a network, the connection is routed via the user selected network. However, that clearly is not what is claimed by Applicant in each of the independent claims above.

Accordingly, since the applied art does not teach or suggest all the claimed limitations, reconsideration and allowance of independent claims 1, 14, 21, and 28-29 are respectfully requested. In addition, dependent claims 2-9, 15-16, 20, and 22-24 variously and ultimately depend from allowable independent claims 1, 14, and 21, and are submitted as being allowable at least on that basis, without further recourse to the patentable features recited therein.

Unpatentability Rejection over Lager in View of Davison et al.

Withdrawal of the rejection of claims 18-19 and 26-27 under 35 U.S.C. §103(a) as allegedly being unpatentable over Lager in view of newly-presented Davison et al. (US 2003/0026273) ("Davison") is requested. The legal requirements for unpatentability have been discussed above.

The Examiner alleges that Lager discloses the support node described in paragraph 3 of the present office action, and that Lager discloses all the limitations claimed in claims 18-19 and 26-27, with the exception of removing an existing tunnel to the first gateway support node in response to activation of tunnel establishment and successful establishment of the tunnel to the second gateway support node. The Examiner alleges that Davison makes up for this admitted deficiency of Lager. Applicant respectfully disagrees with this characterization of Lager in combination with Davison, as discussed further below. In addition, and even assuming, *arguendo*, that Davison teaches that which the Examiner alleges, a proposition with which Applicant strenuously disagrees, Davison fails to make up for the previously identified deficiencies of Lager discussed above with respect to claims 17 and 25 from which claims 18-19 and 26-27 respectively depend.

Discussion of Davison and its Deficiencies

According to its abstract, Davison is purportedly directed to a method and apparatus that associates a domain name of a home gateway with one or more permanent virtual circuits (PVC).

After the PVC is established, a tunneling protocol is used to request the domain name of the home gateway, and the domain name is associated with the PVC. When a user logs on via an access communication device, the user will provide a domain name of a home gateway with which the user desires to communicate. A PVC associated with the home gateway is then used to allow the user to communicate with the home gateway. The domain name of the home gateway may be periodically verified to detect any changes.

Davison teaches that if the domain name of a gateway changes, a new tunnel to the same gateways establish, thereby ending a situation in which two tunnels to the same gateway may exist. When the older one of the tunnels is deleted, one tunnel for the Gateway still exist. Thus, Davison teaches that there must be at least one tunnel to a Gateway.

Thus, Lager in combination with Davison teaches that, if the tunnel has been established to a first gateway, a second tunnel may be established in the first gateway and, in response to two tunnels to the first gateway existing, the older one may be deleted. However that is clearly not what is claimed by applicant in any of pending claims 1-29, particularly in claims 18-19 and 26-27.

Accordingly, since the applied art does not teach or suggest all the recited limitations of claims 18-19 and 26-27, withdrawal of the rejection and allowance of these claims is respectfully requested.

Allowable Subject Matter

Applicants note with appreciation the indication that claims 10-13 are allowed and that claims 2-9, 15-16, and 22-23 are drawn to allowable subject matter and would be allowed if rewritten in independent form.

However, in light of the distinguishing arguments presented above at least with respect to the independent claims, further amendment of the claims into independent forms is not believed to be necessary for allowance of the application.

Accordingly, reconsideration and allowance of independent claims 1, 14, and 21 from which dependent claims 2-9, 15-16, and 22-23 variously and ultimately depend are respectfully requested.

Conclusion

All rejections having been addressed, Applicant submits that each of pending claims 1-29 in the present application is in immediate condition for allowance. An early indication of the same would be appreciated.

In the event the Examiner believes that an interview would be helpful in resolving any outstanding issues in this case, the Undersigned Attorney is available at the telephone number indicated below.

For any fees that are due, including fees for extensions of time during the pendency of this application, please charge Deposit Account Number 03-3975 from which the Undersigned Attorney is authorized to draw. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Date: December 2, 2008

Respectfully submitted,

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